

Data Paper

Sakae Kudoh, Tomotake Wada, Masaki Uchida and Satoshi Imura. Ground temperature data from an ice-free area at mid-range of Yukidori Zawa, Langhovde, East Antarctica during January 2010–January 2012. *Polar Data Journal*. 2021, 5, p.37–46. <https://doi.org/10.20575/00000024>.

(Received 12/1/2020; Accepted 2/18/2021)

1st submission

Editor Start Date: 12/1/2020

Editor Stop Date: 1/6/2021

Reviewer #1 (12/7/2020–12/14/2020)

Reviewer #2 (12/8/2020–1/6/2021)

Editor Comments to the Author:

Dear Dr. Kudoh

Both referees provided positive reviews of your manuscript and I am therefore recommend publication in PDJ after minor revisions.

I would like to thank you for submitting your manuscript to PDJ.

For reference style, please follow the template that can be downloaded from Submission Guidelines web site.

Best wishes

Reviewer #1: Anonymous

General

I think this paper should be considered for publication because few data on ground temperature have been published in East Dronning Maud Land near Syowa Station, even in Antarctica (e.g. Hrbáček et al., 2018). The text is concise and well-written, though some sections require some clarification and correction. See my specific comments.

1. Background and summary

L20-28

I didn't understand the purpose of the ground temperature observation well. How will observations of ground temperature at depths of 0 cm and 10 cm contribute to the study of the terrestrial ecosystem in this region?

2. Locations

L33-36

The description about the climate condition of the study site is not enough. Please show the annual mean and range of air temperature observed by AWS. Is the study site a place where permafrost is distributed? If the study site is permafrost distributed, please also describe the thickness of the active layer.

The ground temperature varies greatly due to the heat insulation effect of snow. Please also describe the snow conditions such as the snow cover period and the maximum snow depth at the study site.

3. Method

L42-44

Please describe the conditions of the surface layer where the ground temperature sensor was buried, such as the gravel size and the ratio of fine materials.

L45

2012.. → 2012.

5. Technical Validation

L63-66

Figure 2 shows that the daily range of ground surface temperature between September and November 2010 was around 10 degrees, while the daily range of ground surface temperature during the same period in 2011 was smaller. Therefore, the relatively high ground temperatures in the winter of 2011 are considered to be partly due to the fact that the study site was covered with snow. Please describe this point as well.

L74-77

Does the "ice" in this sentence mean frozen ground? I didn't understand what this sentence meant. How about simply stating "In early December diurnal freeze-thaw occurred to a depth of at least 10 cm"?

Reference:

Hrbáček et al., (2018): Active layer monitoring in Antarctica: an overview of results from 2006 to 2015, Polar Geography, DOI: 10.1080/1088937X.2017.1420105

Reviewer #2: Anonymous

General comments

This manuscript describes the ground temperature data at mid-range of Yukidori Zawa, Langhovde, East Antarctica. The topic is valuable and within the scope of Polar Data Journal. The manuscript almost obeys the PDJ manuscript style and consists of eight chapters. The authors explain the data file so that other researchers can reuse it by reading this manuscript. However, there are several points to be worried about English usage. The manuscript would benefit

tremendously from language and usage editing by either a native English speaker or a professional editor. There are also several typographical errors throughout the manuscript.

Specific comments

L.24. Both the pdf manuscript and the Microsoft Word manuscript use smart quotes, and the orientation of the shapes is not correct. In addition, one double quotation is sufficient in this case. Change "... projects, ""Studies ..." to "... projects, "Studies ...".

L.26. Change "... AMB)"" had ..." to "... AMB)" had ...".

L.45. Change "2012.." to "2012..".

L.132. The resolution of Fig.3 is rough and difficult to see. It is necessary to increase the resolution.

L.147. One parenthesis may be missing.

L. 147 and 149. Are the month and day always double digits, or are they sometimes a single digit? Usually, mm and dd of "yyyy/mm/dd" mean two digits each. If it is a single digit, additional text would be needed. The same applies to "hh:mm", which requires additional text.

L. 122 and 138. It is necessary to unify the style of the figure captions. Change "Fig. 2" to " Fig. 2." and "Fig. 3" to " Fig. 3..".

L. 168-185. It is necessary to unify the style of "References" with reference to Submission Guidelines (https://pdr.repo.nii.ac.jp/?page_id=63) or a template that can be downloaded from Submission Guidelines.

Authors Response:

Thank you for careful reading and kind comments of both reviewers. We checked all, and tried to revise our manuscript. The followings are our revision points;

Response to reviewer #1;

1. Background and summary

The purpose of our observation on ground temperature at shallow soil was added briefly in Background and summary section.

2. Locations

Features of the observation site, such as soil, average air temperature, permafrost depth, and so on were described based on the previous related studies conducted on ice-free areas on Syowa Oasis.

3. Method

I added soil condition at our study site briefly.

5. Technical Validation

I added explanation of snow cover in winter, as reviewer's comment.

I also revised our previous sentence about freeze-thaw occurrence in early summer as suggested.

Reference

Thank you for your suggestion. I added the paper and some previous studies measured ground temperature and permafrost depth.

Response to reviewer #2;

Thank you for your careful reading. I recognized my English is not good. I will check and revise fully in my English after our paper can be accepted by native speaker.

Specific comments

Thank you for your checking. I fully revised and tried to revise as Submission Guideline.

2nd submission

Editor Start Date: 2/14/2021

Editor Stop Date: 2/16/2021

Reviewer #1 (2/15/2021–2/16/2021)

Editor Comments to the Author:

I would recommend it for acceptance after the minor points listed below.

As noted in your response letter, please revise the English usage (by either commercial service or native speakers) before the final acceptance.

I think that the "6. Data usage" is a bit strange.

Why do people need to ask permission in writing?

The data will be open in web-site. This is not common to ask permission for using this kind of data.

Reviewer #1: Anonymous

It has been well revised throughout the manuscript, and I think it is acceptable. Here are some minor corrections. Please check them.

L31 Remove extra space after "This"

L46 Permafrost →Permafrost table

L51 and so on.. →and so on.

L142 Kudoh et al →Kudoh et al.

Table 1. 2012/1/2 12:00 11.3 →11.30

Corrected accordingly.

Editorial Office's note

Calculate checksum date: 2/18/2021

Algorithm:SHA256

Hash link: <http://id.nii.ac.jp/1434/00000024> > hash list